FIG. 1

TRANSMITTING APPARATUS 10A

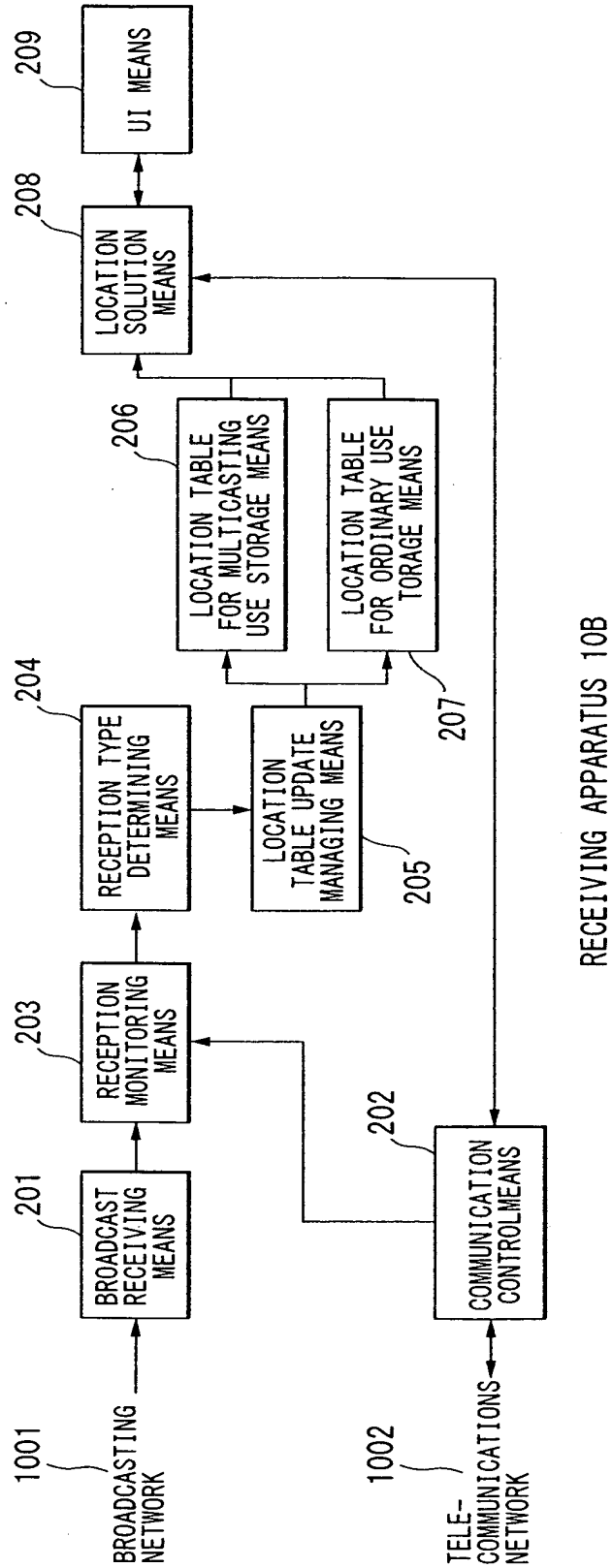FIG. 2

RECEIVING APPARATUS 10B

FIG. 3

CONTENT INDENTIFIER	STRAGE AREA
URI://aaa.broadcast/news.mpg	http://aaa-bc-news.mpg
URI://bbb.broadcast/news.mpg	http://aaa-bc-drama.mpg
URI://aaa.archive/sports.mpg	http://aaa-sports.mpg
URI://aaa.archive/comedy.mpg	http://aaa-comedy.mpg
. . .	. . .
URI://zzz.archive/drama.mpg	http://zzz-drama.mpg

STORED CONTENTS LIST IN CONTENT
REGISTERING MEANS OF TRANSMITTING APPARATUS

FIG. 4

CONTENT INDENTIFIER	TRANSMISSION CHANEL	DELIVERY SCHEDULE
URI://aaa.broadcast/news.mpg	Ch1	2003/03/15 19:00:00 ~ 2003/03/15 20:00:00
URI://bbb.broadcast/drama.mpg	Ch2	2003/03/15 21:00:00 ~ 2003/03/15 23:00:00
· · ·	· · ·	· · ·

CONTENT DELIVERY SCHEDULE TABLE IN DISTRIBUTION
SCHEDULE SETTING MEANS OF TRANSMITTING APPARATUS

FIG. 5

CONTENT INDENTIFIER	STRAGE AREA	RELEASE SCHEDULE
URI://aaa.archive/sports.mpg	http://aaa-sports.mpg	2003/03/15 19:00:00 ~ 2003/03/15 20:00:00
URI://aaa.archive/comedy.mpg	http://aaa-comedy.mpg	—
· · ·	· · ·	· · ·
URI://zzz.archive/drama.mpg	http://zzz-drama.mpg	—

CONTENT RELEASE SCHEDULE TABLE IN DISTRIBUTION
SCHEDULE SETTING MEANS OF TRANSMITTING APPARATUS

FIG. 6


```
┌─────────────────────────────┐
│       SIMULTANEOUS          │      DETERMINATION
│ ACCESSIBILITY DETERMINATION │      CRITERIA E5
└─────────────────────────────┘
              │
        ╱ S101 ╲
     ╱  ARE STARTING  ╲        Yes
    ╱  DAY AND TIME SET ╲──────────
     ╲       ?         ╱
        ╲           ╱
           No
              │
        ╱ S102 ╲
     ╱  ARE ENDING   ╲         Yes
    ╱  DAY AND TIME SET ╲──────────
     ╲       ?         ╱
        ╲           ╱
           No
```

| DETERMINED TO HAVE NO POSSIBILITY OF SIMULTANEOUS ACCESSING | DETERMINED TO HAVE POSSIBILITY OF SIMULTANEOUS ACCESSING |

S104   S103
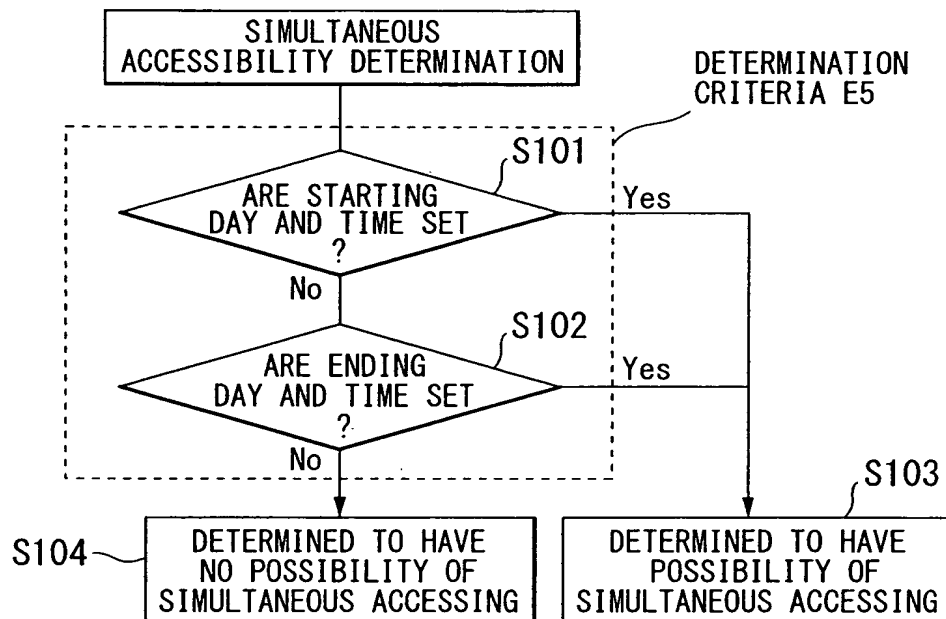
FLOW OF SIMULTANEOUS ACCESSIBILITY DETERMINATION
PROCESSING IN TRANSMITTING APPARATUS

FIG. 7

CONTENT IDENTIFIER	LOCATOR
URI://aaa.broadcast/news.mpg	Ch1-2003_0315_190000~2003_0315_200000
URI://bbb.broadcast/drama.mpg	Ch2-2003_0315_210000~2003_0315_230000
URI://aaa.archive/sports.mpg	http://aaa-sports.mpg
・ ・ ・	・ ・ ・

LOCATION TABLE FOR MULTICASTING USE

FIG. 8

CONTENT INDENTIFIER	LOCATOR
URI://aaa.archive/comedy.mpg	http://aaa-comedy.mpg
・ ・ ・	・ ・ ・
URI://zzz.archive/drama.mpg	http://zzz-drama.mpg

LOCATION TABLE FOR ORDINARY USE

FIG. 9

DISTRIBUTION PATTERN	LOCATION TABLE FOR MULTICASTING USE	LOCATION TABLE FOR ORDINARY USE
DISTRIBUTION PATTERN1	BROADCASTING	BROADCASTING
DISTRIBUTION PATTERN2	BROADCASTING	TELECOMMUNICATIONS
DISTRIBUTION PATTERN3	TELECOMMUNICATIONS	BROADCASTING
DISTRIBUTION PATTERN4	TELECOMMUNICATIONS	TELECOMMUNICATIONS

TRANSMISSION PATTERN OF LOCATION TABLES IN LOCATION
DISTRIBUTION CONTROL MEANS OF TRANSMITTING APPARATUS

FIG. 10

LOCATION TABLE IDENTIFIER	DISTRIBUTION ROUTE	DISTRIBUTION TYPE	DISTRIBUTION SCHEDULE	DISTRIBUTION INTERVALS
LT_ID1	BROADCASTING NETWORK	MULTICASTING	Ch1 2003/3/1~2003/3/31	10 SECONDS
LT_ID2	TELECOMMUNICATIONS NETWORK	INTERACTIVE	—	—

LOCATION TABLE DISTRIBUTION MANAGEMENT IN LOCATION DISTRIBUTION CONTROL MEANS OF TRANSMITTING APPARATUS

FIG. 11

PRIORITY OF SEARCH	PLACE OF SOLUTION	LOCATION TABLE
1	RECEIVING APPARATUS ID=1	LOCATION TABLE FOR MULTICASTING USE
2	RECEIVING APPARATUS ID=1	LOCATION TABLE FOR ORDINARY USE
3	TRANSMITTING APPARATUS ID=2	—

LOCATION SOLUTION SEQUENCE TABLE IN LOCATION
SOLUTION MEANS IN RECEIVING APPARATUS

FIG. 12

S201

```
RECEIVE CONTENT IDENTIFIER AND
ACCEPT LOCATOR ACQUISITION REQUEST
```

S202

IS THERE
DESIRED CONTEST
IDENTIFIER IN LOCATION TABLE
FOR MULTICASTING
USE ?   — Yes

No

S203

IS THERE
DESIRED CONTEST
IDENTIFIER IN LOCATION TABLE
FOR ORDINARY USE
?   — Yes

No   S204

```
REQUEST LOCATOR ACQUISITION FROM
TRANSMITTING APPARATUS,
AND RECEIVE LOCATOR
```

S205

```
HAND OVER RECEIVED LOCATOR
TO LOCATOR ACQUISITION
```

FLOW OF LOCATION SOLUTION PROCESSING BY LOCATION
SOLUTION MEANS IN RECEIVING APPARATUS

FIG. 13

TRANSMITTING APPARATUS

RECEIVING APPARATUS

S301 USER PRESET OF VIDEO RECORDING OF PROGRAM 1 (URI://aaa.broadcast/news.mpg) BY G・Code

S302 ACQUISITION OF LOCATOR FOR PROGRAM 1 REQUESTED; IDENTIFIER OF PROGRAM 1 = URI://aaa.broadcast/news.mpg

S303 LOCATION TABLE SEARCHED FOR LOCATOR FOR PROGRAM 1

S304 LOCATOR FOR PROGRAM 1 RETURNED: Ch1 3/15 19:00 TO 20:00

S305 RECORDING OF PROGRAM 1 PRESET

A FEW SECOND BEFORE 3/15 19:00

S306 SIMULTANEOUS ACCESSIBILITY DETERMINED FOR PROGRAM 1 →REGISTERED IN LOCATION TABLE FOR MULTICASTING USE

S307 LOCATION TABLE FOR MULTICASTING USE TRANSMITTED (INCLUDING LOCATOR FOR PROGRAM 1)

S308 LOCATOR FOR PROGRAM 1 SOLVED WITH RECEIVED LOCATION TABLE FOR MULTICASTING USE

S309 RECORDING OF PROGRAM 1 STARTED 3/15 19:00

PROCESSING FLOW IN PRESETTING
SERVICE FOR VIDEO RECORDING

FIG. 14

```
┌─────────────────────────────────────────┐
│    EXTRACTION OF LOCATION TABLE FOR      │
│ MULTICASTING USE FOR IMMEDIATE FUTURE    │
└─────────────────────────────────────────┘
                    │
        ┌───────────────────────┐  ⟋S401
        │    LOCATION TABLE FOR  │
        │ MULTICASTING USE EXTRACTED │
        └───────────────────────┘
                    │           ⟋S402
     ┌──────────────────────────────────┐
  ┌─▶│    ONE CONTENT SELECTED OUT OF    │      DETERMINATION
  │  │ LOCATION TABLE FOR MULTICASTING USE │    ⟋ CRITERIA R5
  │  └──────────────────────────────────┘
  │                 │
  │        ╱─────────────────╲   ⟋S403
  │  No   ╱      IS IT         ╲
  └──────╱   X MINUTES BEFORE   ╲
         ╲   TIME TO DELIVER OR ╱
          ╲   RELEASE CONTENT  ╱
           ╲        ?         ╱
            ╲───────────────╱
                 Yes │
        ┌──────────────────────────────────┐  ⟋S404
        │   CONTENT EXTRACTED AS LOCATION TABLE │
        │ FOR MULTICASTING USE INTENDED FOR DELIVERY │
        └──────────────────────────────────┘
```
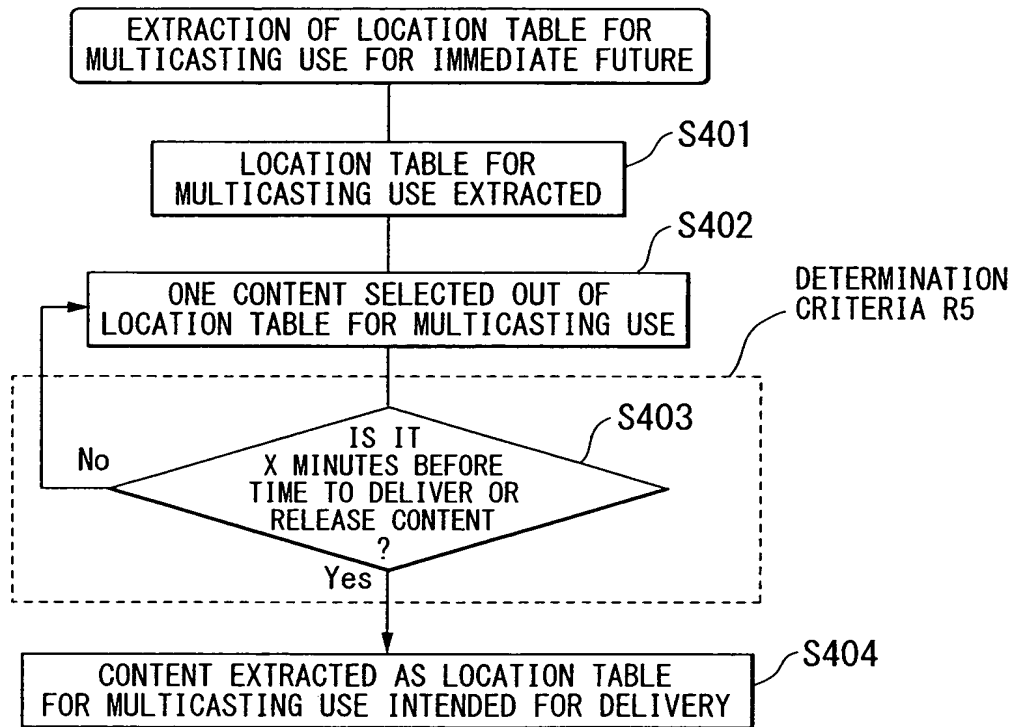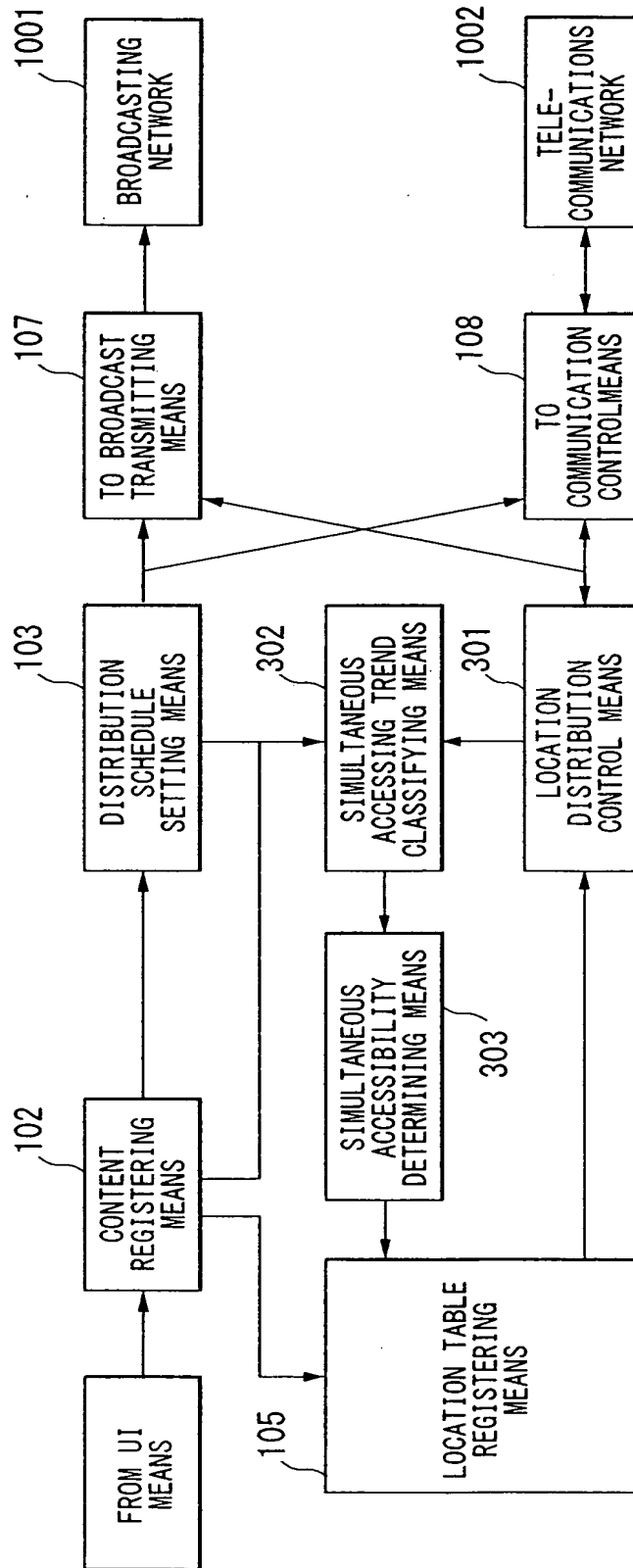
PROCESSING FLOW TO EXTRACT LOCATION
TABLE FOR MULTICASTING USE BY LOCATION
DISTRIBUTION CONTROL MEANS IN TRANSMITTING APPARATUS

FIG. 15

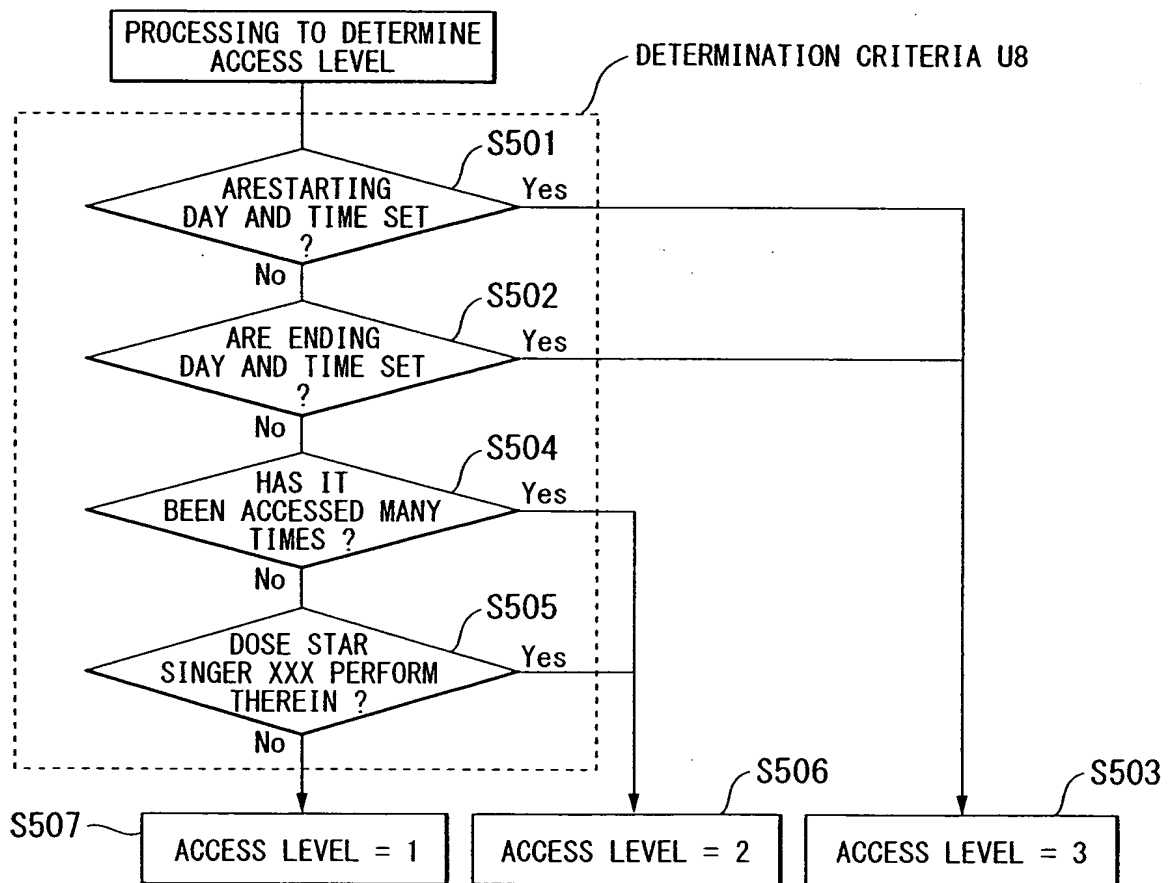TRANSMITTING APPARATUS 10A

FIG. 16

CONTENT INDENTIFIER	ACCESS LEVEL
URI://aaa.broadcast/news.mpg	1
URI://bbb.broadcast/drama.mpg	1
URI://aaa.archive/sports.mpg	1
URI://aaa.archive/comedy.mpg	3
. . .	
URI://zzz.archive/drama.mpg	3

ACCESS LEVEL LIST

FIG. 17

PROCESSING FLOW TO SET ACCESS LEVEL BY SIMULTANEOUS ACCESSING TREND
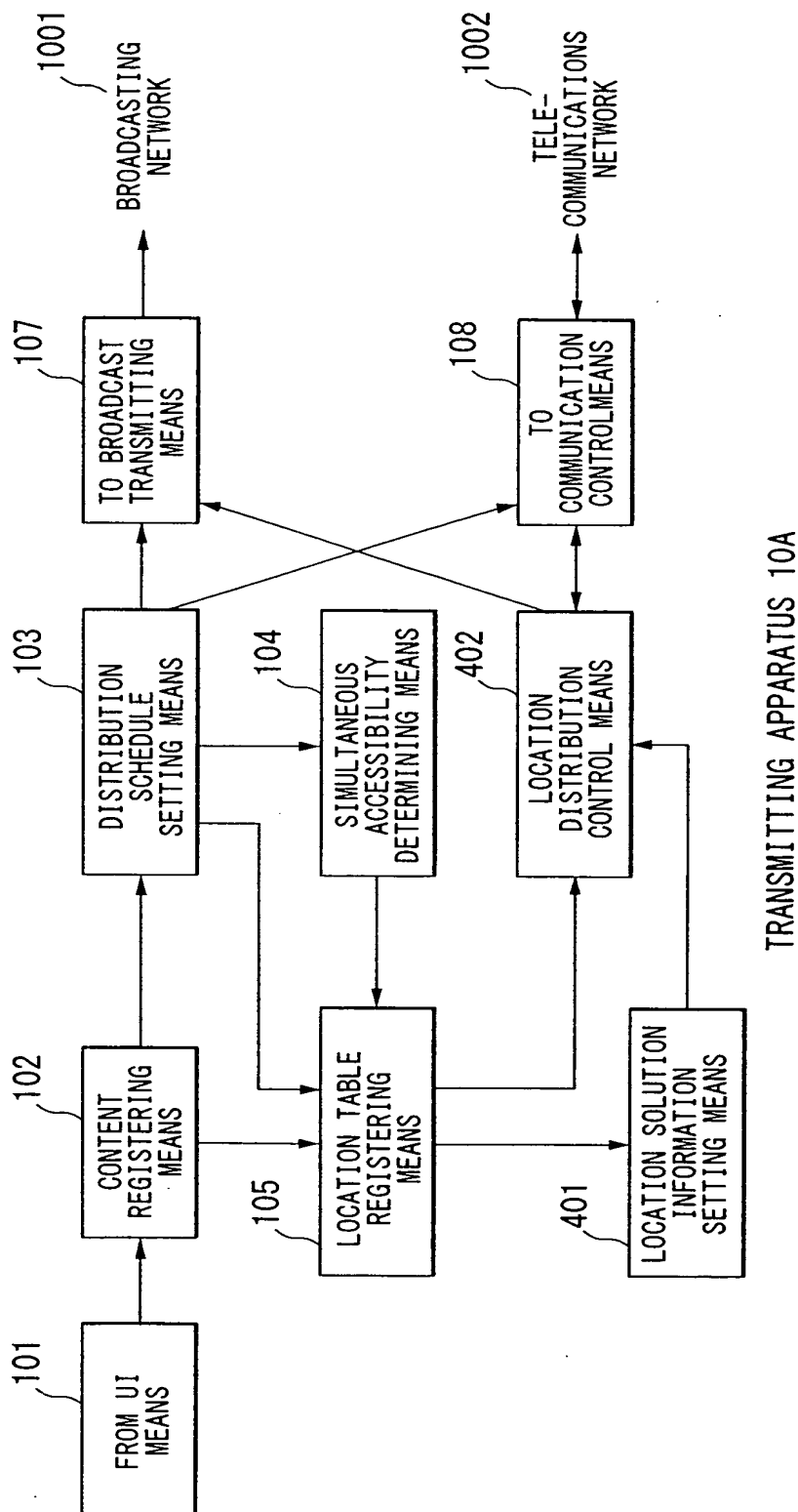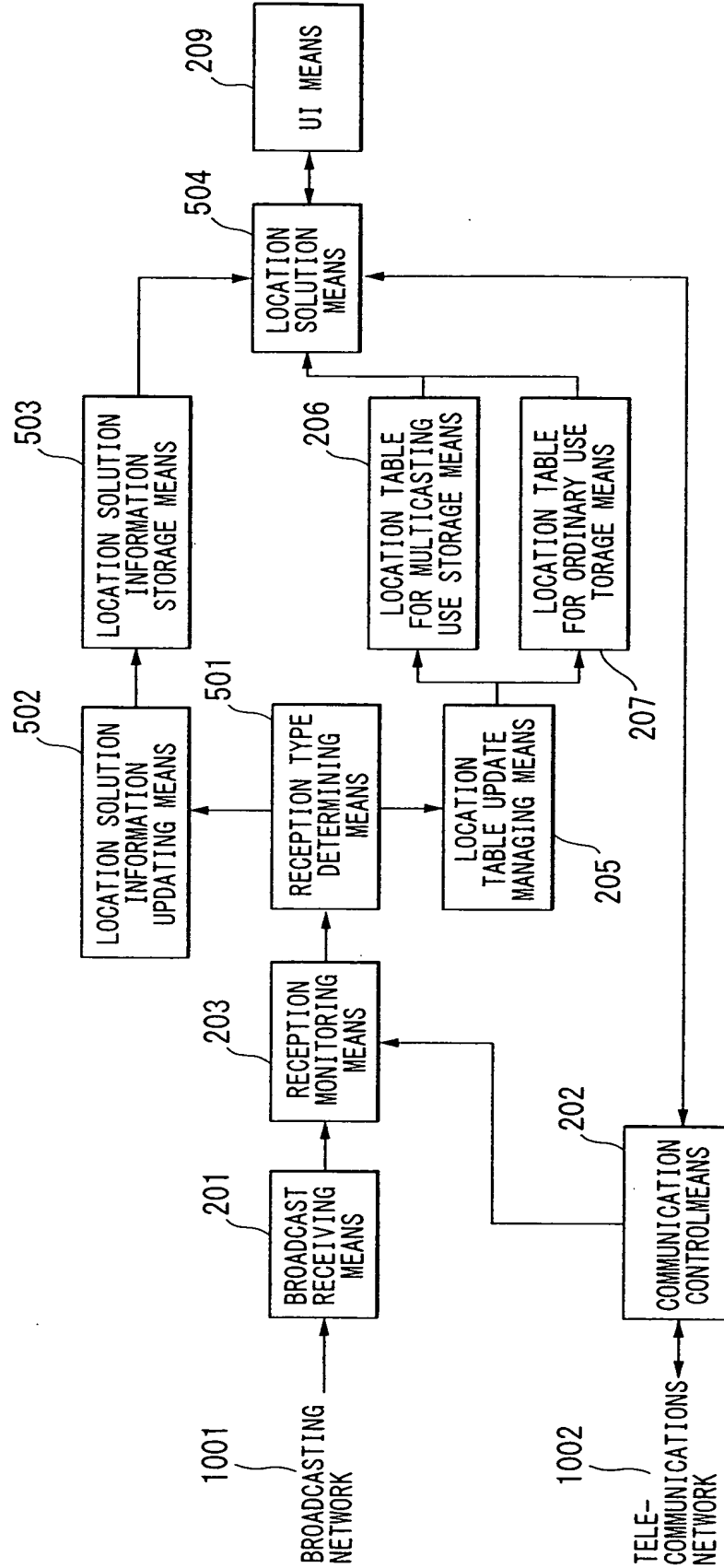CLASSIFYING MEANS IN TRANSMITTING APPARATUS

FIG. 18

101 — FROM UI MEANS

102 — CONTENT REGISTERING MEANS

103 — DISTRIBUTION SCHEDULE SETTING MEANS

104 — SIMULTANEOUS ACCESSIBILITY DETERMINING MEANS

105 — LOCATION TABLE REGISTERING MEANS

107 — TO BROADCAST TRANSMITTING MEANS

108 — TO COMMUNICATION CONTROL MEANS

401 — LOCATION SOLUTION INFORMATION SETTING MEANS

402 — LOCATION DISTRIBUTION CONTROL MEANS

1001 — BROADCASTING NETWORK

1002 — TELE-COMMUNICATIONS NETWORK

TRANSMITTING APPARATUS 10A

FIG. 19

RECEIVING APPARATUS 10B

FIG. 20

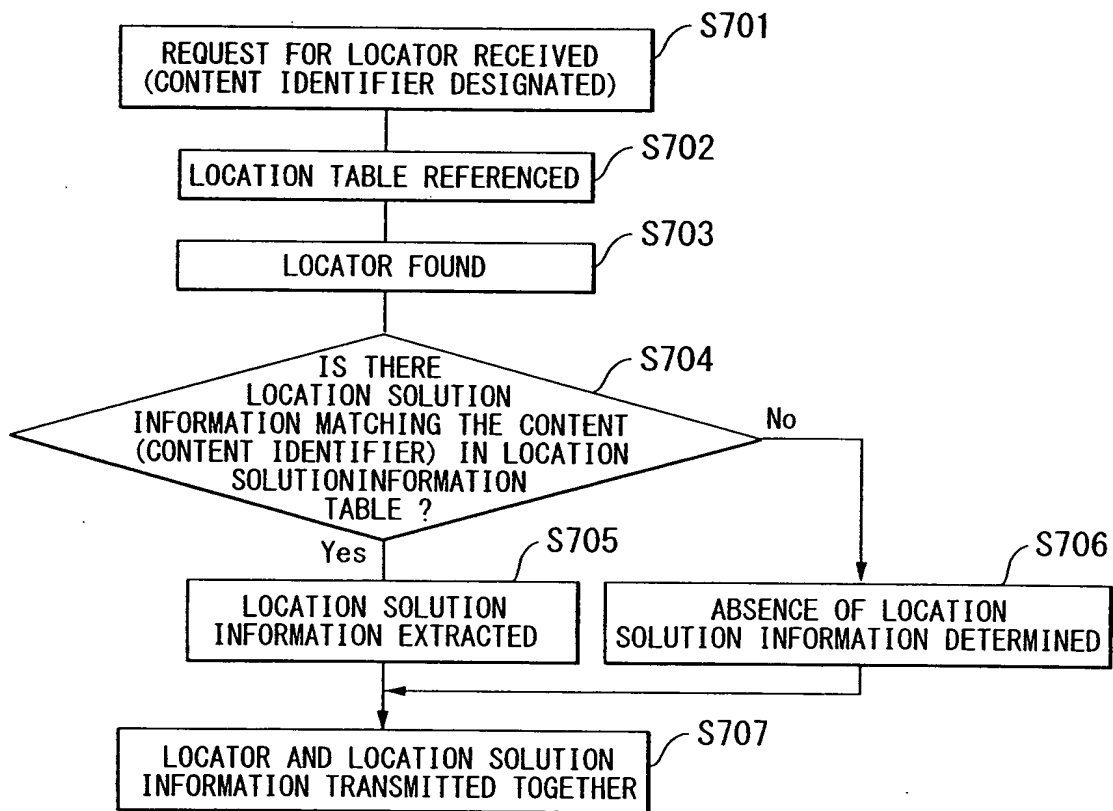| CONTENT INDENTIFIER	ACCESS CONDITIONPLACE	PLACE OF SOLUTION	METHOD OF SOLUTION
URI://aaa.broadcast/news.mpg	18:55~18:59	RECEIVING APPARATUSID=1	SEE LOCATION TABLE FOR MULTICASTING USE
URI://aaa.archive/sports.mpg	2003/3/1 00:00:00 ~ 2003/4/1 00:00:00	RECEIVING APPARATUSID=1	SEE LOCATION TABLE FOR MULTICASTING USE

LOCATION SOLUTION INFORMATION
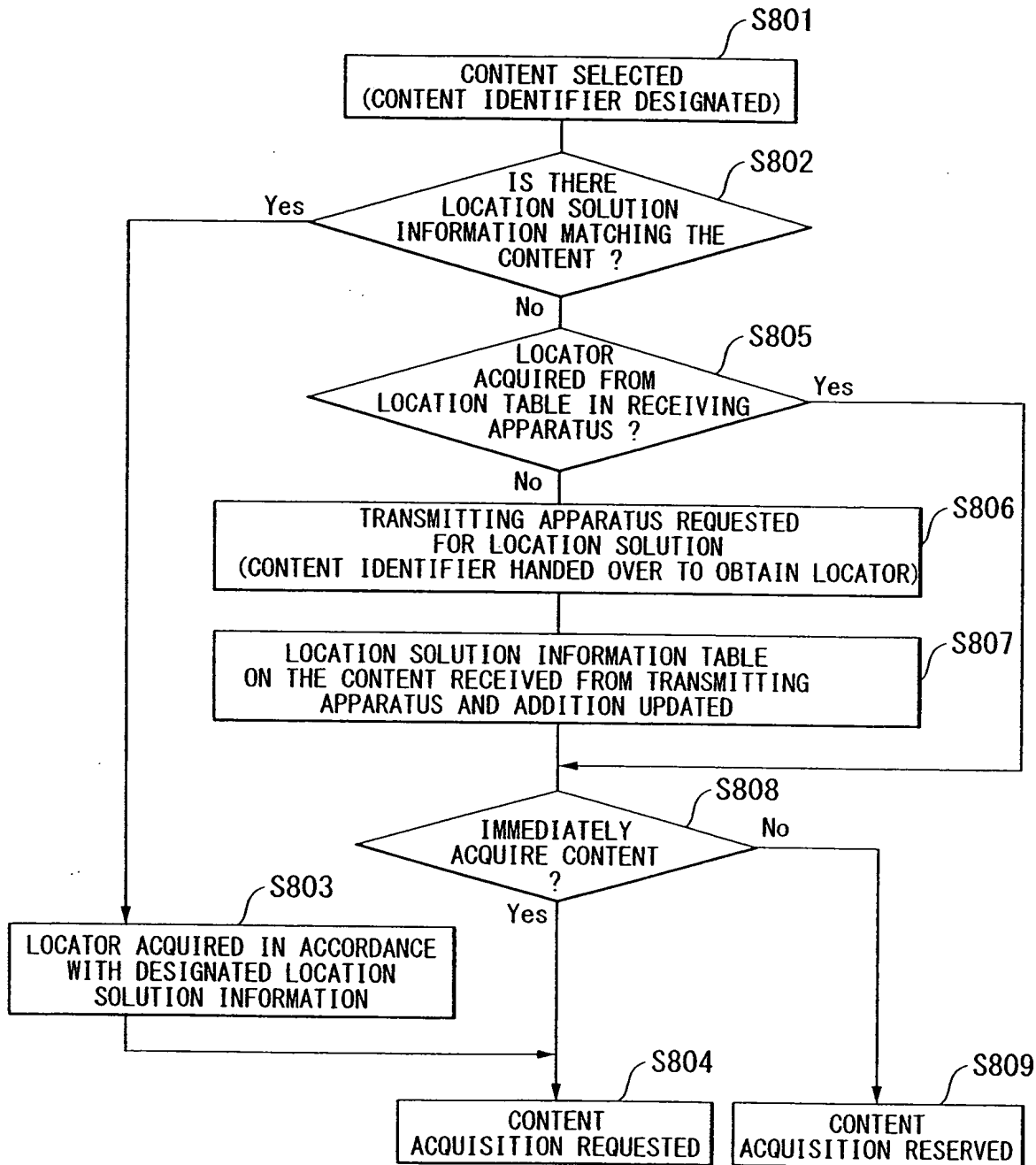
LOCATION SOLUTION INFORMATION TABLE

FIG. 21

```
┌─────────────────────────────┐
│  GENERATION OF LOCATION     │
│   SOLUTION INFORMATION      │
└─────────────────────────────┘
              │
              ▼
          ╱───────────╲           S601
        ╱      HAS      ╲
      ╱   LOCATION TABLE  ╲        No
     ╱  FOR MULTICASTING USE ╲──────────┐
      ╲    BEEN UPDATED     ╱
        ╲        ?        ╱
          ╲───────────╱
              │ Yes          S602
              ▼
┌─────────────────────────────┐
│    LOCATION SOLUTION        │
│ INFORMATIONSET REGARDING    │
│  CONTENT ADDED OR UPDATED   │
└─────────────────────────────┘
              │
              ▼
┌─────────────────────────────┐
│  GENERATION OF LOCATION     │
│   SOLUTION INFORMATION      │
└─────────────────────────────┘
```
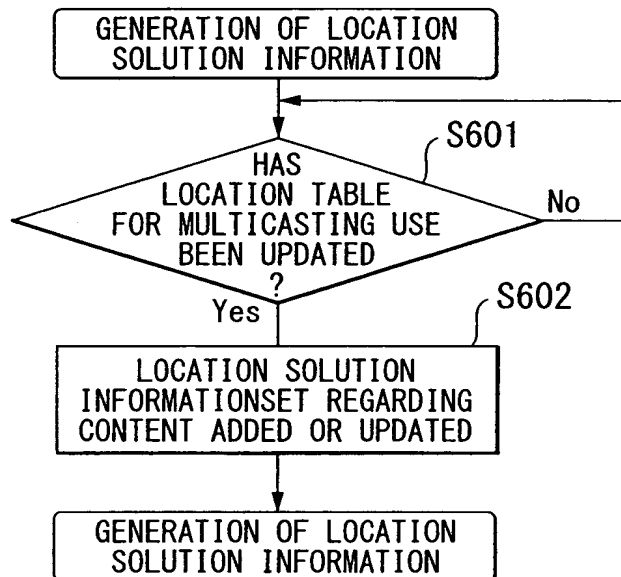
PROCESSING FLOW TO GENERATE LOCATION SOLUTION
INFORMATION IN TRANSMITTING APPARATUS

FIG. 22

REQUEST FOR LOCATOR RECEIVED
(CONTENT IDENTIFIER DESIGNATED) — S701

LOCATION TABLE REFERENCED — S702

LOCATOR FOUND — S703

IS THERE
LOCATION SOLUTION
INFORMATION MATCHING THE CONTENT
(CONTENT IDENTIFIER) IN LOCATION
SOLUTIONINFORMATION
TABLE ? — S704

No

Yes

LOCATION SOLUTION
INFORMATION EXTRACTED — S705

ABSENCE OF LOCATION
SOLUTION INFORMATION DETERMINED — S706

LOCATOR AND LOCATION SOLUTION
INFORMATION TRANSMITTED TOGETHER — S707

PROCESSING FLOW TO TRANSMIT LOCATION SOLUTION
INFORMATION IN TRANSMITTING APPARATUS

FIG. 23

S801

CONTENT SELECTED
(CONTENT IDENTIFIER DESIGNATED)

S802

IS THERE
LOCATION SOLUTION
INFORMATION MATCHING THE
CONTENT ?

Yes ───►

No

S805

LOCATOR
ACQUIRED FROM
LOCATION TABLE IN RECEIVING
APPARATUS ?

Yes ───►

No

S806

TRANSMITTING APPARATUS REQUESTED
FOR LOCATION SOLUTION
(CONTENT IDENTIFIER HANDED OVER TO OBTAIN LOCATOR)

S807

LOCATION SOLUTION INFORMATION TABLE
ON THE CONTENT RECEIVED FROM TRANSMITTING
APPARATUS AND ADDITION UPDATED

S808

IMMEDIATELY
ACQUIRE CONTENT
?

No

Yes

S803

LOCATOR ACQUIRED IN ACCORDANCE
WITH DESIGNATED LOCATION
SOLUTION INFORMATION

S804

CONTENT
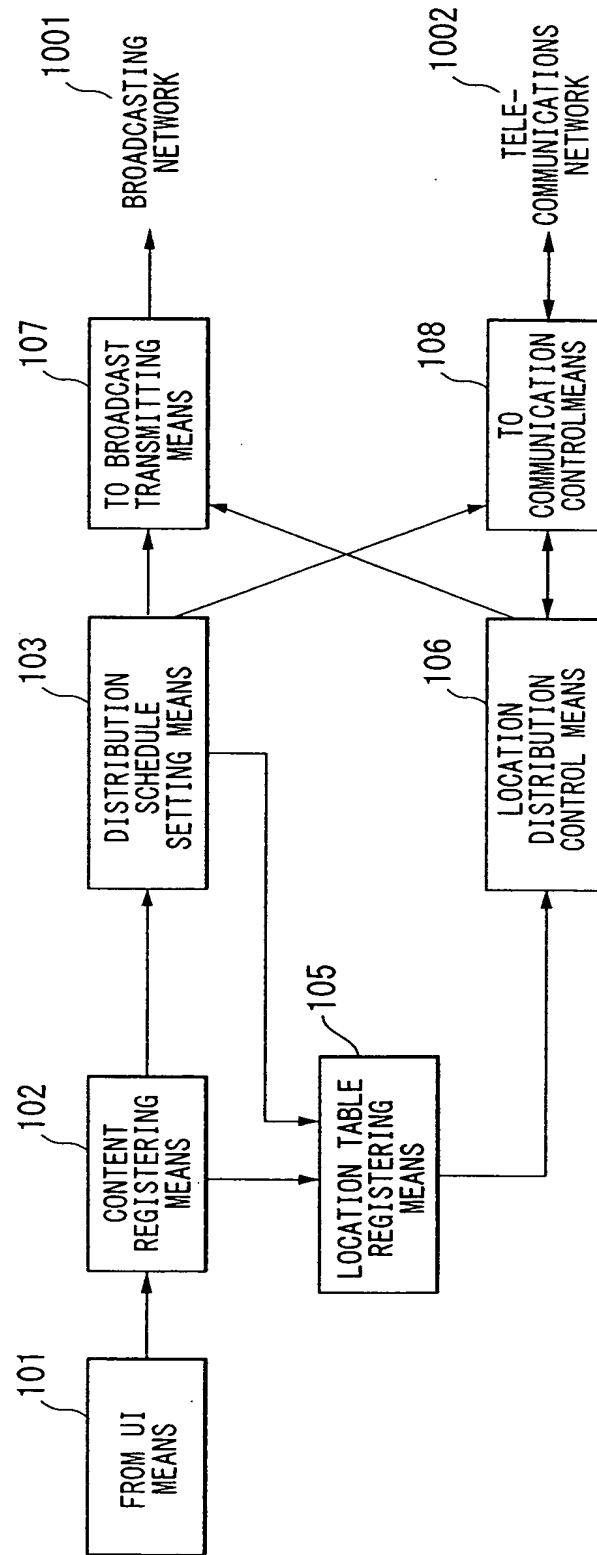ACQUISITION REQUESTED

S809

CONTENT
ACQUISITION RESERVED

PROCESSING FLOW OF LOCATION SOLUTION WHEN
CONTENT IS SELECTED IN RECEIVING APPARATUS
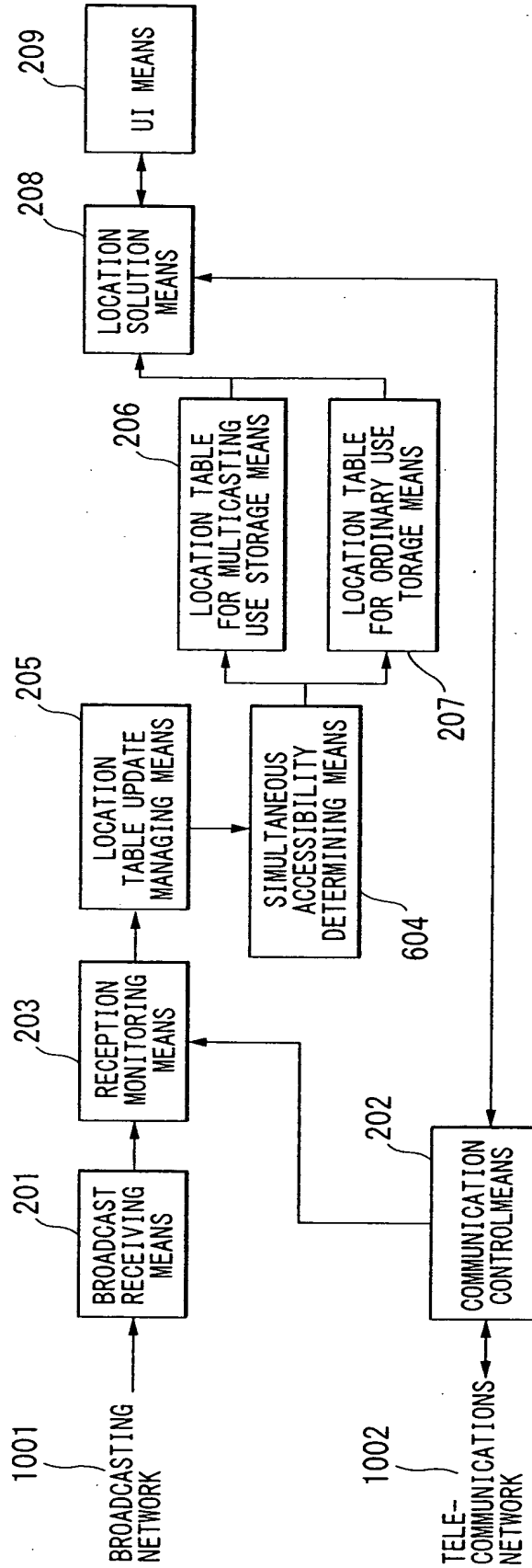
FIG. 24
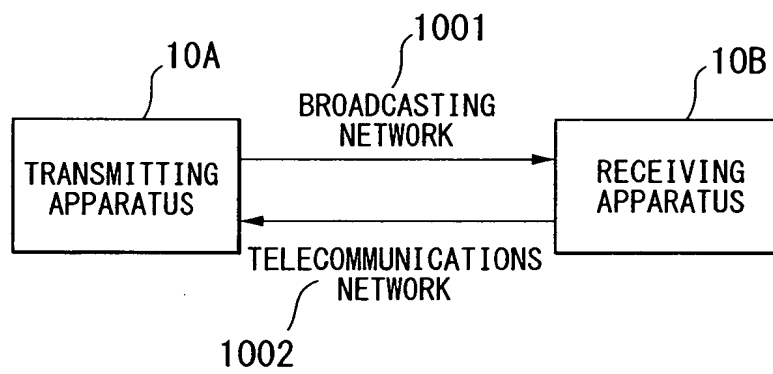
OVERALL CONFIGURATION OF
CONTENT MULTICASTING SYSTEM

FIG. 25

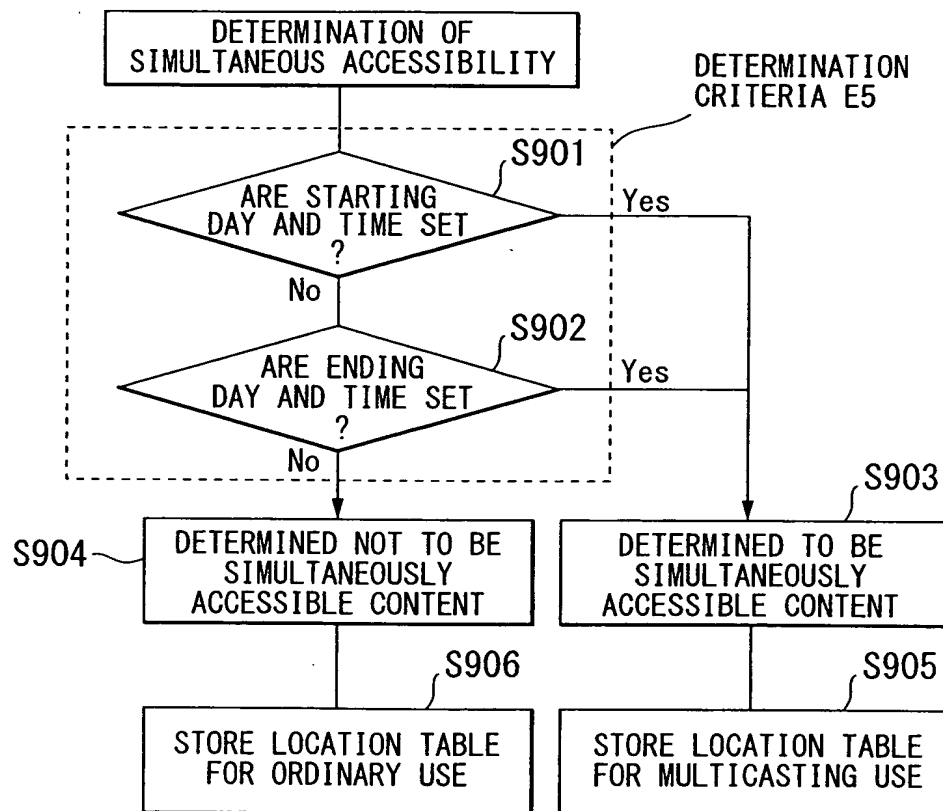TRANSMITTING APPARATUS 10A

FIG. 26

RECEIVING APPARATUS 10B

FIG. 27

CONTENT IDENTIFIER	LOCATOR	DELIVER/RELEASE SCHEDULE
URI://aaa.broadcast/news.mpg	Ch1-2003_0315_190000~2003_0315_200000	2003/03/15 19:00:00~2003/03/15 20:00:00
URI://bbb.broadcast/drama.mpg	Ch2-2003_0315_210000~2003_0315_230000	2003/03/15 21:00:00~2003/03/15 23:00:00
URI://aaa.archive/sports.mpg	http://aaa-sports.mpg	2003/03/01 00:00:00~2003/04/01 00:00:00
URI://aaa.archive/comedy.mpg	http://aaa-comedy.mpg	—
URI://zzz.archive/drama.mpg	http://zzz-comedy.mpg	—
· · ·	· · ·	· · ·

LOCATION TABLE

FIG. 28

```
┌─────────────────────────────┐
│      DETERMINATION OF       │              DETERMINATION
│  SIMULTANEOUS ACCESSIBILITY │              CRITERIA E5
└─────────────────────────────┘
```

S901

ARE STARTING DAY AND TIME SET ? — Yes

No

S902

ARE ENDING DAY AND TIME SET ? — Yes

No

S904 — DETERMINED NOT TO BE SIMULTANEOUSLY ACCESSIBLE CONTENT

S903 — DETERMINED TO BE SIMULTANEOUSLY ACCESSIBLE CONTENT

S906 — STORE LOCATION TABLE FOR ORDINARY USE

S905 — STORE LOCATION TABLE FOR MULTICASTING USE

FIG. 29A

LOCATION TABLE FOR MULTICASTING USE 1

CONTENT IDENTIFIER	LOCATOR
URI://aaa.broadcast/news.mpg	Ch1-2003_0315_190000~2003_0315_200000
URI://aaa.broadcast/drama.mpg	Ch1-2003_0315_210000~2003_0315_230000

FIG. 29B

LOCATION TABLE FOR MULTICASTING USE 2

CONTENT IDENTIFIER	LOCATOR
URI://bbb.broadcast/news.mpg	Ch2-2003_0315_190000~2003_0315_200000
URI://bbb.broadcast/drama.mpg	Ch2-2003_0315_210000~2003_0315_230000